



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,222	12/20/2001	Hashem Akhavan-Tafti	Lum. 4.1-77	3442
23700	7590	07/26/2004	EXAMINER	
LUMIGEN, INC. 22900 W. EIGHT MILE ROAD SOUTHFIELD, MI 48034			HUANG, EVELYN MEI	
			ART UNIT	PAPER NUMBER

1625

DATE MAILED: 07/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/029,222	Applicant(s) AKHAVAN-TAFTI ET AL.	
	Examiner Evelyn Huang	Art Unit 1625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 10-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-20 are pending. Claims 21-24 have been canceled according to the amendment filed on 4-16-2004.

Claim Rejections - 35 USC § 112

2. The rejection under 35 U.S.C. 112, second paragraph is maintained for claims 1, 4-9 for reasons of record.

The rejection is withdrawn for claims 2, 3 upon reconsideration in view of Applicant's remarks.

Applicant argues that the salient inquiry here is whether the scope of the subject matter embraced by the claims is clear, and the instant definition of R4-R11 being a substituent which can contain from 1-50 atoms selected from C, H, N, O, S, P, Si and halogen is clear. Applicant further contends that the examiner has demonstrated a fundamental misunderstanding of the legal concepts and misapplied the law, as claim language is not indefinite under 112 second paragraph because it is broad.

On the contrary, the basis of this rejection is not its breadth, but rather that the meaning of R4-R11 thus defined is unclear as the number and specific atoms involved in the individual substituents and how these atoms are related to one another are not fully described. For example, does applicant intend R4-R11 to be substituents containing 50 N, 50 O, 50 P or 50 Si etc. ?

Claim Rejections - 35 USC § 112(1)

3. The rejection under 35 U.S.C. 112 first paragraph is maintained for claims 1, 4-9 for reasons of record.

The rejection is withdrawn for claims 2, 3 upon reconsideration in view of Applicant's remarks.

Applicant maintains that the examiner has not carried the burden of explaining why one of ordinary skill in the art would not be able to make and use the instant invention. The specification needs not disclose what is well known in the art.

Indeed, while a complete range of examples is not required to support the entire scope of the claims, the scope of the claims must be commensurate with that of the objective enablement. The instant claims encompass numerous classes of structurally diverse compounds, some of which whose structures are not fully described, and some are structurally unrelated to the example compounds, especially those compounds wherein R4-R11 are substituents having 50 O, 50 P, 50 Si etc. which are not known at the time of the invention. Since the starting materials and the processes of making such unobvious compounds are not known to the skilled artisan, undue experimentation would be required for one of ordinary skill in the art to make and use all the inventions as claimed.

Claim Rejections - 35 USC § 103

4. The rejection for Claims 1-4 under 35 U.S.C. 103(a) as being obvious over Akhavan-Tafti (6126870) is maintained for reasons of record. The rejection is not applicable to claim 10 as indicated in the previous office action. Correction of this error is hereby made.

Applicants submit that the inventive compounds are unexpectedly superior to the compounds of Akhavan-Tafti as they enhances speed of generating chemiluminescence. The additional advantages of the inventive compounds are listed on page 19 of the specification.

However, only general statements are made in the specification without showing a side by side comparison between the closest prior art compound and the instant compound. Unexpected results therefore have not been established and the instant claims remain obvious over Akhavan-Tafti.

Claim Rejections - 35 USC § 112

5. The written description rejection under 35 U.S.C. 112, first paragraph, is maintained for claims 1, 4-9 for reasons of record.

The rejection is withdrawn for claims 2, 3 upon reconsideration in view of Applicant's remarks.

Applicant argues that the definition for R4-R11 being substituent which can contain 1-50 atoms selected from C, H, N, O, S, P, Si and halogen atoms is part of the original claim and therefore fully satisfy the written description requirement.

This rejection, however, is not a new matter rejection as Applicants seem to imply.

Since a compound is defined by its structure formed by specific number and types of atoms in a specific bonding relationship, the mere recitation of R4-R11 being substituents which can contain 1-50 atoms selected from C, H, N, O, S, P, Si and halogen atoms as recited in the instant fails to provide a full description of R4-R11. Such a definition reaches out to as yet unidentified substituents, which applicant admits to be the intention. However, a full description of these unknown substituents is lacking in the specification, and the written description requirement is not satisfied.

Applicant further contends that the examiner has demonstrated a fundamental misunderstanding of the legal concepts and misapplied the law, as the enablement and written description are separate requirements.

Indeed, enablement and written description are separate requirements. The enablement rejection and the written description rejection in the previous office action were therefore set forth separately. However, they may be related. In the instant case, the absence of a full description of the R4-R11 substituents in the specification (i.e. lack of written description) leads to undue experimentation for one of ordinary skill in the art to make and use all the compounds as claimed (i.e. unenablement).

Allowable Subject Matter

6. Claims 10-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 1625

Although Akhavan-Tafti generically discloses the instant (see paragraph 5 above), the instant has an alkyl or substituted alkyl attached to both of the thiols. Motivation to modify the prior art example compounds via multiple changes to arrive at the instant is lacking.

Conclusion

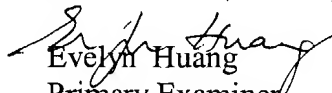
7. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Evelyn Huang whose telephone number is 571-272-0686. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecila Tsang can be reached on 571-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Evelyn Huang
Primary Examiner
Art Unit 1625